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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/631,996

07/31/2003

Joanna Aizenberg

AIZENBERG 5-2-15

2316

47394

7590

02/22/2006

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EXAMINER

MARTINEZ, JOSEPH P

ART UNIT

PAPER NUMBER

2873

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary	Application No. 10/631,996	Applicant(s) AIZENBERG ET AL.	
	Examiner Joseph P. Martinez	Art Unit 2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 6-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4 and 5 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wohlstadter (5986811).

Re claim 1, Wohlstadter teaches for example in fig. 4(a)-4(c), an apparatus, comprising: a planar substrate (54); and an array of substantially transparent spherical micro-lenses on the substrate (52), the micro-lenses forming a pattern, the pattern having an internal two-dimensional lattice symmetry on the planar substrate (col. 10, ln. 21-23); and wherein each micro-lens comprises one of a convex bulge in a surface of the planar substrate and concave depression in a surface of the planar substrate (col. 10, ln. 12-14) and wherein the micro-lenses comprise hydrogel (col. 2, ln. 55-63, wherein the office interprets the hydrophilic polymer to teach the claimed limitations) that swells and contracts (fig. 4(a)-4(c)) in a manner responsive to an environmental condition (col. 3, ln. 36-46).

But, Wohlstadter fails to explicitly teach the substrate is made of hydrogel.

However, Wohlstadter teaches for example, varying the chemistry of the substrate (54, col. 4, ln. 7-8) and the office interprets the use of the hydrophilic polymer to be included in the varied material.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Wohlstadter to include the substrate is made of hydrogel to improve cohesion, as taught by Wohlstadter (col. 4, ln. 5-8).

Re claim 2, Wohlstadter further teaches for example in fig. 4(a)-4(c), each micro-lens has one spherical surface (top portion of 52) and one flat surface (back side of 54, wherein the office interprets 54 to be made of hydrogel), the flat surface being on the opposite side of the substrate as the spherical surface (back side of 54, wherein the office interprets 54 to be made of hydrogel).

Re claim 4, supra claim 1.

But, Wohlstadter fails to explicitly teach a center-to-center spacing between the micro-lenses of the array is less than about 500 microns.

However, Wohlstadter teaches for example, varying the size of the micro-lenses and the size of the array (col. 10, ln. 10-32).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Wohlstadter to include a

spacing of less than about 500 microns in order to accommodate different sizes of sensors.

Re claim 5, Wohlstadter further teaches for example in fig. 5, a spatially segmented light intensity detector (72, col. 5, ln. 61-63) positioned to intercept light spots produced by the micro-lenses; and a data processor (74) configured to receive intensity and position data from the light intensity detector.

Allowable Subject Matter

Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art taken alone or in combination fails to anticipate or fairly suggest the limitations of the claims, in such a manner that a rejection under 35 USC 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in dependent claim 3.

Specifically regarding claim 3, Wohlstadter teaches the state of the art of a tunable lens.

But, Wohlstadter fails to explicitly teach a combination of all the claimed features including a second planar substrate that is substantially transparent; and wherein the

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array is constrained to rest on the second substrate in a manner that enables the array to swell and contract, as claimed.

Response to Arguments

Applicant's arguments filed 12-2-05 have been fully considered but they are not persuasive.

Re applicant's arguments on p. 7-8, wherein the applicant argues that the prior art does not disclose hydrogel, have been considered, but are not persuasive. The office interprets a hydrophilic monomer which adsorbs to hydrophilic domains (col. 2, ln. 55-63) for use as a lens, wherein the lens may be a colloid (col. 10, ln. 40-42) to teach the claimed limitation of hydrogel.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Huang (6654174) teaches the use of silicone hydrogel for the formation of microlenses (col. 5, ln. 50-55).

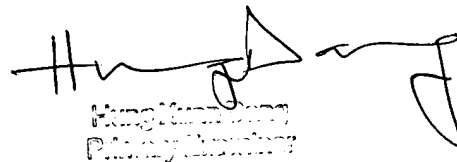
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph P. Martinez whose telephone number is 571-272-2335. The examiner can normally be reached on M-F 7:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPM
2-6-06



Handwritten signature and stamp. The stamp reads: "Patent Application Information Retrieval (PAIR) System".